

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

Drawn and compiled by: T.D. Baker

SCOPE OF PROJECT

This project includes, but is not limited to new construction including: clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, landing construction, acquisition and installation of drainage structures, acquisition and installation of geotextile and hauling and application of rock, and road closures.

This project also includes, but is not limited to reconstruction including:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
S-1000	MP 1.30	Remove structures currently in place, replace with structure according to the Culvert List. Place structure at correct elevation to provide drainage for the stream crossing as directed by the Contract Administrator.
S-1000	MP 1.35-MP 1.37	Reconstruct road according to construction stakes. The current outside edge will be offset approximately 4'. The existing roadedge will be excavated, such that the fill widening will be sufficiently compacted as directed by the Contract Administrator, placed in lifts and compacted at the new toe of fill. Apply rock as listed on the Rocklist.

This project also includes, but is not limited to prehaul and post haul maintenance of all roads listed as Purchaser Maintenance under Clause C-50.

Purchaser maintenance shall consist of reshaping the roadway surface with a grader, cleaning ditches to their original construction configuration, removing all woody debris and slash from ditch lines and ditchouts and repairing or replacing any drainage structures damaged by the Purchaser during the course of the sale.

This work shall be completed prior to the start of timber haul and again at the completion of use.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
S-1000	2.40 miles	Grade and shape road surface and turnouts. Apply rock according to the Rocklist and install culverts according to the Culvert List. Grade, shape, and rock the following turnouts with approximately 10 cy at MP 1.12, MP 1.43, MP 1.67, MP 1.86, MP 2.08.

SECTION 1 - GENERAL CLAUSES

- 1.1-1
- Clauses in this plan apply to all construction or reconstruction or pre-haul maintenance including landings unless otherwise noted.
- 1.1-2
- Construction or reconstruction or pre-haul maintenance of the following road/s is required. All road/s shall be constructed on the State's location and in accordance with the Road Plan.

<u>Road</u>	<u>Length</u>	<u>Type</u>
S-1000	2.40 miles	pre-haul maintenance
S-1000	0.02 miles	reconstruction
S-1000	0.01 miles	reconstruction

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

Any departure from this Road Plan including relocation, extension, change in design or additional roads shall be submitted, in writing, to the Contract Administrator for consideration. Submitted plans must be approved before construction begins.

1.1-3

Construction or reconstruction or pre-haul maintenance of the following road/s is not required. **If the Purchaser elects to use any of these roads, they shall be constructed or reconstructed on the State's location and in accordance with this Road Plan.**

<u>Road</u>	<u>Length</u>	<u>Type</u>
LS 7+72	7.72 stations	construction
LS 0+99	0.99 stations	construction
LS 0+88	0.88 stations	construction
LS 0+75	0.75 stations	construction
LS 1+49	1.49 stations	construction
LS 1+07	1.07 stations	construction
LS 0+87	0.87 stations	construction
LS 0+87.1	0.87 stations	construction
LS 1+82	1.82 stations	construction
LS 1+05	1.05 stations	construction

1.1-4

On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser's choice of construction season or techniques shall be at the Purchaser's expense. Hidden conditions include, but are not limited to, solid subsurface rock, subsurface springs or saturated ground, and unstable soil.

1.2-1

Construction and/or reconstruction shall not be permitted from November 1 to April 30 unless authority to do so is granted, in writing by the Contract Administrator.

1.2.1-1

Pioneering shall not extend past construction that will be completed during the current construction season. Drainage shall be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Culvert placement in live streams shall precede embankment where culverts are to be placed along natural ground. Temporary diversion culverts shall be provided when designed culverts are elevated above natural ground within embankments.

Culverts shall be installed in completed subgrade as construction progresses.

Culverts shall be installed with a backhoe or an excavator.

Subgrade, ditches and culvert installation shall be completed and are subject to written approval by the Contract Administrator prior to rock application.

1.2-2

Purchaser shall not use roads constructed or reconstructed or pre-haul maintained under this Road Plan for hauling, other than timber cut on the right of way, without written approval from the Contract Administrator.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

1.2-3 All roads shall be constructed using track mounted hydraulic excavators unless otherwise authorized, in writing, by the Contract Administrator.

1.3-1 Rock hauling shall not be permitted from November 1 to April 30 unless authorized, in writing, by the Contract Administrator.

1.3-2 Snowplowing shall not be permitted unless authorized, in writing, by the Contract Administrator.

1.4-2 The following road shall be constructed in accordance with construction stakes.

<u>Road</u>	<u>Stations</u>
S-1000	MP 1.35 – MP 1.37

1.4-3 Construction stake reference points (R.P.'s) that are moved or damaged at any time during construction shall be reset in their original locations by the Purchaser. Excavation and embankment shall not proceed on road segments controlled by said R.P's until all moved or damaged R.P's are reset.

SECTION 2 - CLEARING

2.1-1 Fell all vegetative material larger than 6 inches dbh or over 20 feet high between the marked right-of-way boundaries and within waste areas or if not marked in the field, between clearing limits specified on Typical Section Sheet.

2.1-3 Right-of-way timber shall not be decked within the grubbing limits or in locations that interfere with the construction of the road prism, as defined by the Contract Administrator. Right-of-way timber shall not be decked in locations that impede drainage.

SECTION 3 - GRUBBING

3-1 All stumps shall be removed that fall between grubbing limits shown on the Typical Section Sheet. Those with undercut roots shall be removed.

3-2 Grubbing limits are defined as the entire area between external limits shown on the Typical Section Sheet.

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

4.1-1 Right-of-way debris is defined as all vegetative material larger than one cubic foot in volume, within the clearing limits.

4.1-2 All right-of-way debris disposal shall be completed prior to application of rock.

4.2.3-3 Right-of-way debris shall not be placed against standing timber.

4.2.3-4 Right of way debris shall be scattered outside the grubbing limits.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

SECTION 5 - EXCAVATION

5.1-1

Unless controlled by construction stakes or specific design sheets herein, roads shall be constructed in accordance with dimensions shown on the Typical Section Sheet.

5.1-3

The construction of road grade and alignment shall conform to the State's marked location. The reconstruction of existing road grades shall conform to the original location except as directed by the contract administrator. Grade and alignment shall have smooth continuity, without abrupt changes in direction.

Construction limitations are as follows:

<u>Favorable Grade</u>	<u>Adverse Grade</u>	<u>Minimum Curve Radius</u>
18%	12%	60 feet

Changes in road grade shall not exceed 7%, except as required in this clause.

Adverse grades on curves shall not exceed 10 percent of the curve radius.

Favorable grades through switchbacks shall not exceed 12%.

Transition grades entering and leaving switchbacks shall not exceed a 5% grade change.

The switchback is defined as, the curved segment of road, between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees.

Transition grades required to meet switchback grade limitations, shall be constructed on the tangents preceding and departing from the switchbacks.

5.1-4

Extra widening on the inside of curves shall be:

5.1-5

2 feet extra	80 -100 foot radius curve
4 feet extra	60 - 80 foot radius curve

Curve widening where required, shall be added to the inside of curves.

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table (except as construction staked or designed):

Material Type	Excavation Slope Ratio
Common Earth (on side slopes to 55%)	1:1
Common Earth (55% to 70% sideslopes)	¾:1
Common Earth (on slopes over 70%)	½:1
Fractured or loose rock	½:1
Hardpan or solid rock	¼:1

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

5.1-10
Embankments shall be widened as follows:

Height at Shoulder	Subgrade Widening
Less than 6 feet	2 feet
6 feet or over	4 feet

5.1-11
Embankment slopes shall be constructed no steeper than shown on the following table:

Material Type	Embankment Slope Ratio
Common earth and rounded gravel	1 ½:1
Angular rock	1 ¼:1
Sandy soils	2:1

5.1-12
Organic material shall be excluded from embankment shown on Typical Section Sheet and from waste material deposited on slopes in excess of 40 percent.

5.1-15
Excavated material may be deposited adjacent to the road prism on side slopes up to 45 percent if the material is compacted and more than 50 feet away from live streams.

5.1-19
Select borrow shall be used at the following locations:

<u>Road</u>	<u>Stations</u>	<u>Source</u>
S-1000	MP 1.35 – MP 1.37	Box Car Pitrun

5.1-21
Waste material shall not be deposited within 50 feet of a live stream, riparian management zone, wetland, or wetland management zone.

5.1-24
Turnouts shall be intervisible with a maximum of 1,000 feet between turnouts unless shown otherwise on drawings.

5.2-1
Pioneering operations shall not undercut the final cut slope, deposit excavated material outside the right-of-way limits or restrict drainage.

5.3-1
All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts. Side hill embankments too narrow to accommodate excavation equipment may be placed by end-dumping or side casting until sufficiently wide to support the equipment.

5.4-1
Silt-bearing runoff, as defined by the Contract Administrator, shall not be permitted to go into streams.

5.4-2
Accomplish sediment removal through silt traps, silt fences, settling ponds or other methods to be approved, in writing, by the Contract Administrator.

5.5-5
Finished subgrade shall be crowned as shown on the Typical Section Sheet. Grade and compact to a uniform, firm, rut-free surface to ensure surface runoff in an even unconcentrated manner.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

5.6-2

Seed will meet the specifications shown below:

SEED

Grass seed, of the following composition, proportion, and quality shall be applied at the rate of -- 60 -- pounds per acre.

Kind and Variety of Seed in Mixture	% By Weight	Minimum % Pure Seed	Minimum % Germination
Perennial Rye	40	39.2	90
Red Fescue	35	34.3	90
Highland Bent	10	9.8	85
White Clover	15	14.7	90
Weed Seed		0.5 max	
Inert and Other Crop		1.5 max	
		100.0	

5.6-5

On the following road Purchaser shall provide and apply geotextile to the subgrade to a width that is two feet more than the driving surface width including turnouts.

Road

LS 7+72

Stations

3+00-4+77

5.6-6

Geotextile shall be of the non-woven type weighing at least 4 oz./sq.yd. and designed by the manufacturer o be used for subgrade restraint and separation. Installation of the fabric shall be in accordance with the manufacturer's specifications.

SECTION 6 - DRAINAGE

6.2.1-1

Purchaser shall furnish, install and maintain temporary culverts of the length and diameter specified on the CULVERT LIST. Culverts may be new or used steel, plastic, concrete, or other such material as approved by the Contract Administrator. All said culverts shall be removed from the road bed and State Land as indicated in clause 9.1-2.

6.2.1-1

Purchaser shall furnish, install and maintain corrugated polyethylene and/or aluminized steel Type 2 (ASTM A929, A760, A796, AASHTO M274, M36) pipe as designated on Culvert List. Culvert and flume lengths shall be varied to fit as built conditions subject to written approval by the Contract Administrator.

6.2.1-1A

Corrugated polyethylene pipe shall have a corrugated exterior and smooth interior, shall meet ASTM F405,F667 and AASHTO M252,M294 Standard Specifications, and shall be manufactured with high density polyethylene resins.

6.2.1-2

Manufacturer's approved connectors shall be used for corrugated polyethylene pipe. Annular corrugated bands and culverts ends shall be used on aluminized steel pipe.

6.2.2.1-1

Culvert, downspout, flume and energy dissipater installation shall be in accordance with Culvert and Drainage Specification Detail.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

- 6.2.2.2-1
Any damaged aluminized coating or cut ends shall be retreated with a minimum of 2 coats of zinc rich paint.
- 6.2.2.3-1
Cross drains and surface culverts on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline.
- 6.2.2.3-2
Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent nor more than 10 percent.
- 6.2.2.5-1
Drainage structure outfalls shall not terminate directly on unprotected soil that will erode. Downspouts, flumes and energy dissipaters shall be installed to prevent erosion.
- 6.3-1
Ditches shall be constructed prior to application of rock. Ditches shall drain to culverts, ditchouts and natural drainages.
- 6.3-2
Shaping the ditchline, culvert headwalls and catchbasins shall be completed prior to application of rock and shall be done in accordance with the Typical Section Sheet and Drainage Specification Detail.
- 6.4-1
Catch basins shall be constructed to resist erosion. Minimum dimensions: two feet wide and four feet long with backslopes consistent with Clause 5.1-8: Excavation Slopes.
- 6.5-1
Head walls shall be constructed in accordance with Culvert and Drainage Specification Detail at all cross-drain culverts.
- 6.5-2
Embankment slopes adjacent to culvert inlets and outlets shall be armored for a distance of two culvert diameters on each side of the pipe and one culvert diameter above the pipe in accordance with Culvert List.

SECTION 7 - ROCK

- 7.1-1
Rock used under this contract may be obtained from the following pits on State land:

<u>Source # / Name</u>	<u>Location</u>	<u>Rock Type</u>
1. Box Car Pit	Sec 32 T30N R12W	Pitrun
2. Mary Clark Pit	Sec 32 T30N R12W	1 ½" minus
3. Mary Clark Pit	Sec 32 T30N R12W	2 ½" minus
3. Mary Clark Pit	Sec 32 T30N R12W	Oversize

- 7.3-1
The following pit work is required. Work is to be done according to the approved "pit plan" and as directed by the Contract Administrator.

<u>Name</u>	<u>Requirements</u>
Box Car Pit	½ acre stripping

- 7.1-3
Rock for construction and/or reconstruction under this contract may be obtained from commercial sources. Rock sources will be subject to written approval by the Contract Administrator prior to their use.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

7.1-5 Use of all rock sources are subject to written approval from the Contract Administrator.

7.2-1 All pit operations shall be done according to State plans as listed below:

- Pits
- Mary Clark Pit Plan
- Box Car Pit Plan

7.2.1-1 Rock shall meet the following specifications for gradation when placed on the subgrade. No more than 10% of the rock shall be larger than 8 inches in any dimension and no rock shall be larger than 12 inches in any dimension.

7.4.2-1 Apply at least the minimum required rock quantity as shown on the Rock List.

7.4.2-2 Subgrade shall be approved, in writing, by the Contract Administrator prior to application of rock.

7.4.2-7 Turnouts and curve widening shall have rock applied to the same depth and specifications as the traveled way.

7.4.2-8 Each lift of rock shall be shaped as shown on the Rock List and shall be uniform, firm, rut-free and shaped to ensure surface runoff in an even unconcentrated manner.

7.4.2-9 On the following road, Purchaser shall Spot Rock and apply rock as directed by the Contract Administrator in accordance with quantities shown on the Rock List.

<u>Road</u>	<u>approximately 10 cy at the following mileposts</u>
S-1000	MP 0.43, MP 1.13, MP 1.25, MP 1.28, MP 1.46, MP 1.95, MP 2.03, MP 2.15, MP 2.21, MP 2.23, MP 2.24, MP 2.27, MP 2.31

7.4.3-1 On all new construction the subgrade shall be compacted. Compaction shall be by smooth drum vibratory roller weighting at least 12,000 pounds. Three complete passes at a maximum speed of 3 m.p.h. shall be made.

7.4.3-2 On the required reconstruction and optional construction rock shall be spread and compacted full width in lifts not to exceed 6 inches uncompacted depth. Compaction shall be by smooth drum vibratory roller weighing at least 12,000 pounds. Three complete passes at a maximum speed of 3 m.p.h. shall be made on each lift.

7.4.3-3 Rock shall be spread, shaped and compacted concurrently with rock hauling operations.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

7.4.4-1

Riprap shall consist of angular stone placed as indicated in this plan.

1. Loose Rip rap - The stone for loose riprap shall be hard, sound and durable. It shall be free from segregation, seams, cracks and other defects tending to destroy its resistance to weather. Loose rip rap shall be free of rock fines soil or other extraneous material.

- a. Heavy Loose Riprap - Shall meet the following requirements for grading:

At least/Not More Than	Minimum Size	Maximum Size
40% / 90%	1 Ton (1/2 cu.yd.)	--
70% / 90%	300 lbs. (2 cu. ft.)	--
10% / 30%	--	50 lbs.

- b. Light Loose Riprap - Shall meet the following requirements for grading:

At least/Not More Than	Minimum Size	Maximum Size
20% / 90%	300 lbs. to 1 ton	--
80% / --	50 lbs. to 1 ton	--
10% / 20%	--	50 lbs.

7.4.4-2

Riprap shall be set in conjunction with or immediately following construction of the embankment. No placement by end-dumping or dropping of riprap shall be allowed.

SECTION 9 - ROAD AND LANDING ABANDONMENT

9.1-1

The following road/s shall be abandoned by the purchaser following completion of timber harvest.

<u>Roads</u>	<u>Stations</u>
LS 7+72	7.72 stations
LS 0+99	0.99 stations
LS 0+88	0.88 stations
LS 0+75	0.75 stations
LS 1+49	1.49 stations
LS 1+07	1.07 stations
LS 0+87	0.87 stations
LS 0+87.1	0.87 stations
LS 1+82	1.82 stations
LS 1+05	1.05 stations

9.1-2

Abandonment shall consist of:

1. Removing all temporary culverts. The resulting backslopes shall be 1:1 or shallower. Material removed shall be placed on the road bed and compacted with slopes of 2:1 or shallower. Newly formed cutslopes shall be grass seeded as indicated in clause 5.6-2.
2. All removed culverts are the property of the Purchaser and shall be removed from State land.
3. Construct non-driveable water bars located as directed by the Contract Administrator. Water bars shall intercept the ditch link, key into the road cut slope and freely drain.
4. Remove any berms, except as directed.
5. Block the roads to vehicular traffic by means of "tank traps."

ROAD PLAN

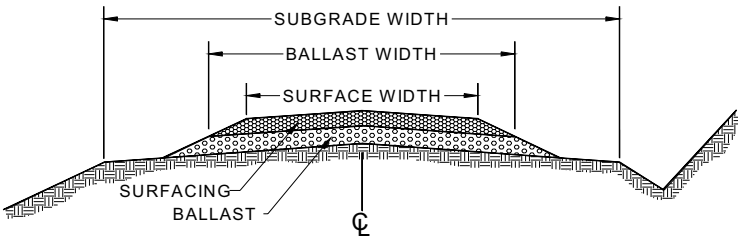
ROAD PLAN DATE: 5/15/06

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

ROCK LIST



SECTION VIEW

- 1. Rock quantities, subtotals and totals are “truck measure” estimates. Rock shall be applied to at least the depths listed. All depths are compacted depths.
- 2. Rock slopes shall be 1½ (H) : 1 (V).
- 3. All rock sources are subject to approval by the Contract Administrator.
- 4. Rock source 1=Box Car Pitrun, Rock source 2=Mary Clark 1 ½ minus stockpile
Rock source 3=Mary Clark 2 ½ minus stockpile, Rock source 4=Mary Clark Oversize

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QUANTITY (cu.yd./sta)	BALLAST SUBTOTAL (cu.yd)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QUANTITY (cu.yd./sta)	SURFACE SUBTOTAL (cu.yd)	
LS 0+87	0+00	0+87	13	1	10	12	60	52						
LS 1+82	0+00	1+82	13	1	10	12	60	109						
LS 1+05	0+00	1+05	13	1	10	12	60	63						
LS 7+72	0+00	7+72	13	1	10	12	60	463						
LS 0+87.1	0+00	0+87	13	1	10	12	60	53						
LS 0+99	0+00	0+99	13	1	10	12	60	59						
LS 0+75	0+00	0+75	13	1	10	12	60	45						
LS 1+49	0+00	1+49	13	1	10	12	60	89						
LS 0+88	0+00	0+88	13	1	10	12	60	53						
LS 1+07	0+00	1+07	13	1	10	12	60	64						
S-1000 select borrow	MP 1.35	MP 1.37		1				140	2				20	
S-1000 Spot Rocking	MP 0.00	MP 2.305							2				140	
S-1000 Turnouts	MP 0.00	MP 2.305							2				50	
S-1000 Backfill									3				60	
rip rap for culverts				4				5						
landings				1				50						
BALLAST TOTAL =									1245	SURFACE TOTAL =				270

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)		CULVERT LENGTH (ft)	FLUME LENGTH (ft)	DOWNSPOUT LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
LS 7+72	0+00	18	60							NT, PR	S-1000 Ditchline temporary
	3+50	18	30							NT, PR	temporary
	5+00	18	30							NT, PR	temporary
LS 0+99	0+00	18	34							NT, PR	S-1000 Ditchline temporary
LS 0+88	0+00	18	34							NT, PR	S-1000 Ditchline temporary
LS 1+49	0+00	18	34							NT, PR	S-1000 Ditchline temporary
LS 0+87	0+00	18	34							NT, PR	S-1000 Ditchline temporary
S-1000	MP 0.67	18	40							SL	
	MP 1.04	18	34							SL	Install after Unit 1 Timber Harvest
	MP 1.17	18	36							SL	Install after Unit 1 Timber Harvest
	MP 1.21	18	34							SL	Install after Unit 1 Timber Harvest
	MP 1.30	24	50							SL, PR	Replace existing structure, Aluminized Steel T-2
	MP 1.51							5			Riprap outlet and rebuild fill slope with light loose riprap
	MP 1.66	18	34							SL	20' ditchout
	MP 2.18	18	38							SL	

Required Minimum Gauge for Metal Pipe

Diameter	Gauge
18"	16
24" - 42"	14
48" - 54"	12
60" - 96"	10

Key:
NT – Native (Bank Run)
SL – Select Fill 2 ½" minus
PR – Pit Run

ROAD PLAN

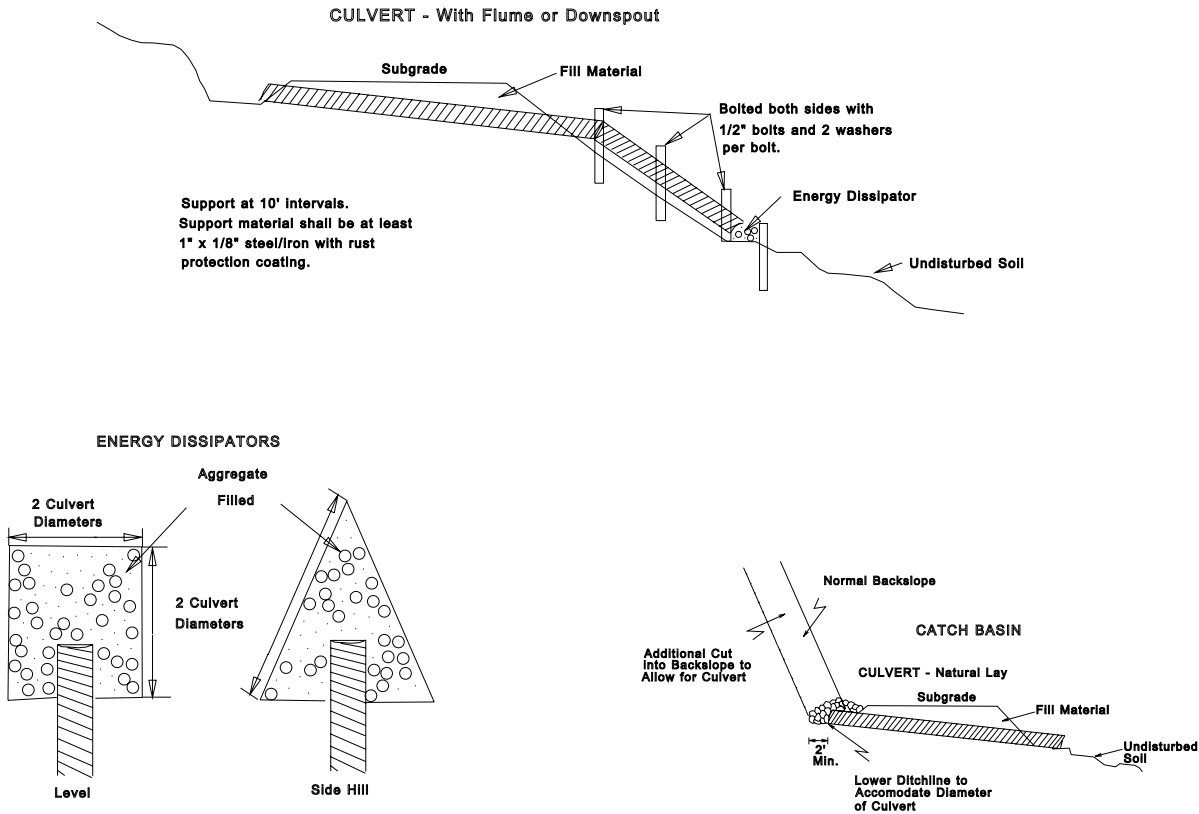
SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

CULVERT AND DRAINAGE SPECIFICATION DETAIL

INSTALLATION REQUIREMENTS:

1. Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.
2. All bedding material of poor or non-uniform bearing capacity shall be removed and replaced with suitable fill. Crushed stone, gravel or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4", whichever is smaller. All material shall be compacted in six inch layers under the haunches, around the sides and above the pipe to the minimum height of cover.
3. Crushed stone and gravel backfill materials shall be compacted to a level of 90-95% AASHTO standard density. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

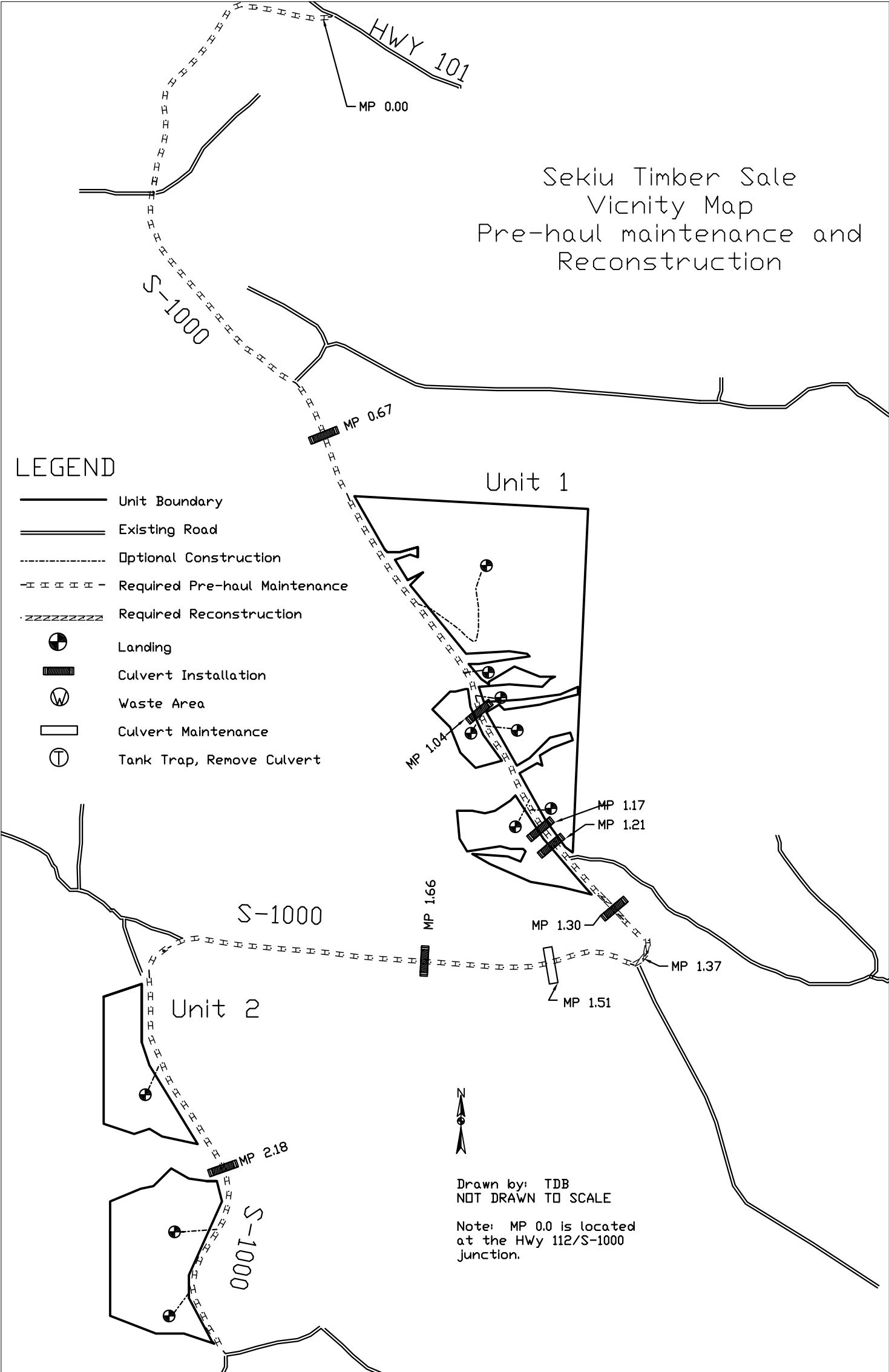


DISSIPATOR SPECIFICATIONS:
Depth: 1 culvert diameter
Aggregate: 6" plus

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06



ROAD PLAN

SALE NAME: Sekiu Timber Sale

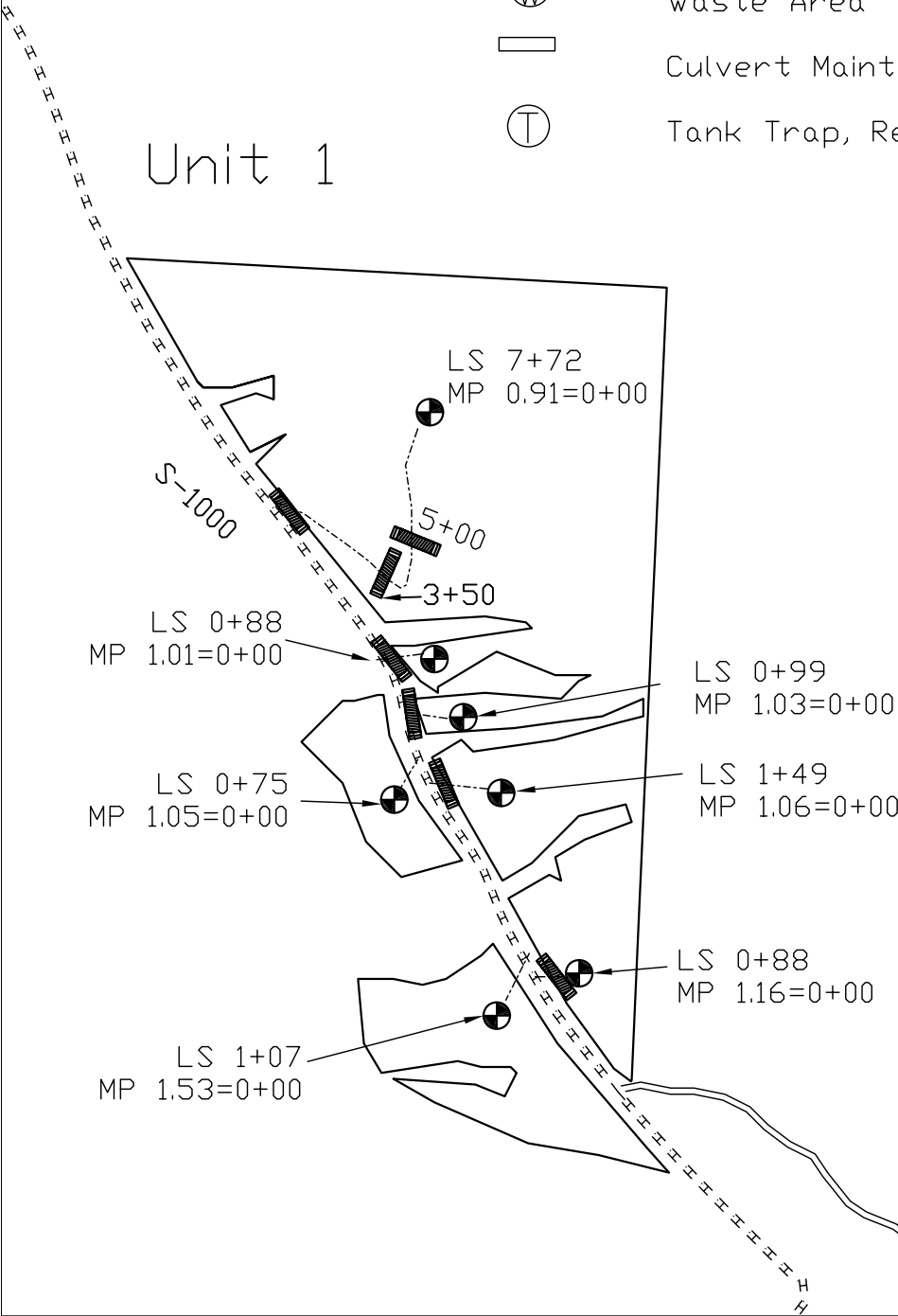
ROAD PLAN DATE: 5/15/06

Sekiu Timber Sale
Unit 1

LEGEND

- Unit Boundary
- Existing Road
- Optional Construction
- Required Pre-haul Maintenance
- Required Reconstruction
- Landing
- Culvert Installation
- Waste Area
- Culvert Maintenance
- Tank Trap, Remove Culvert

Unit 1



Drawn by: TDB
NOT DRAWN TO SCALE

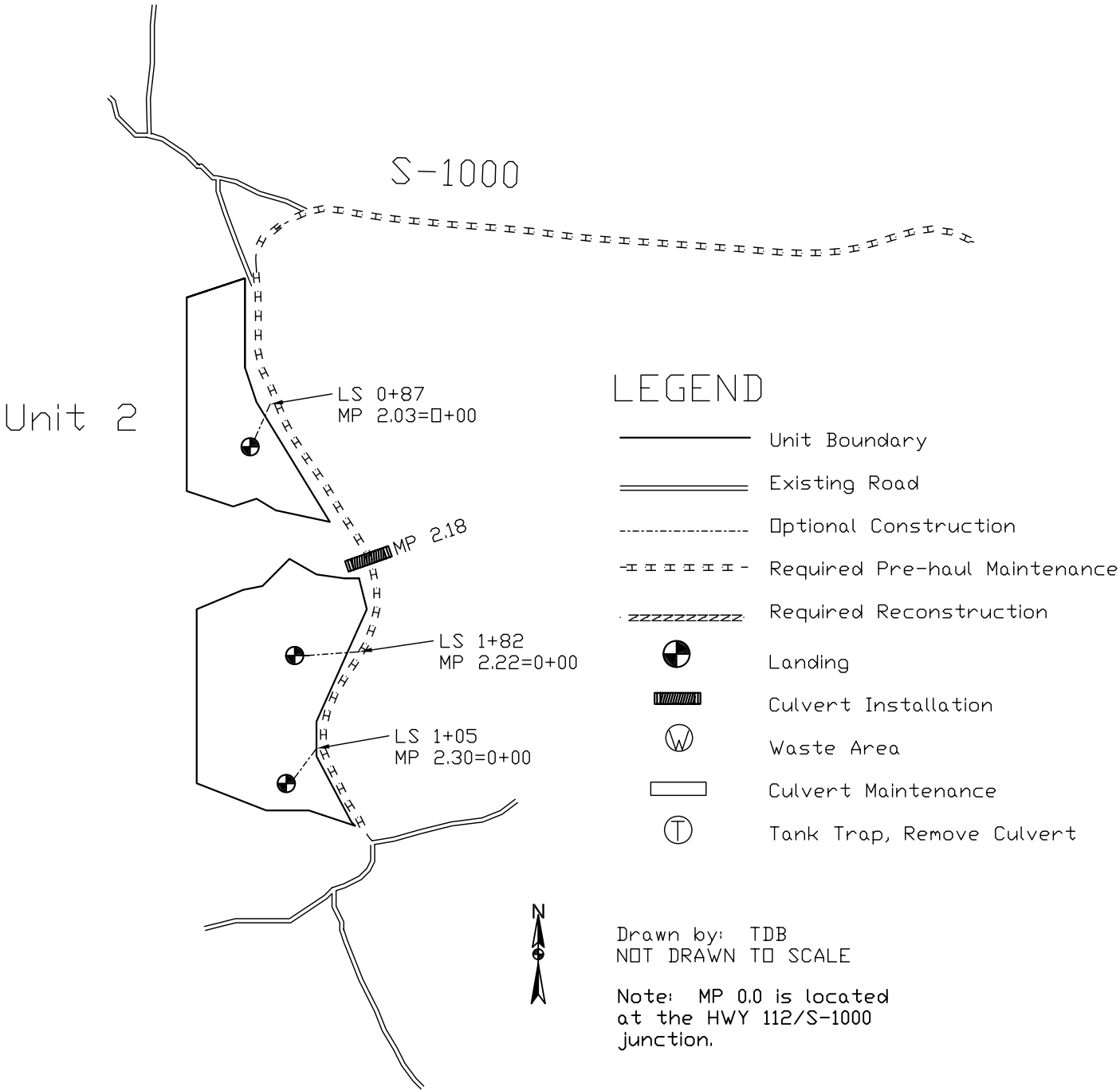
Note: MP 0.0 is located
at the HWY 112/S-1000
junction.

ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

Sekiu Timber Sale
Unit 2



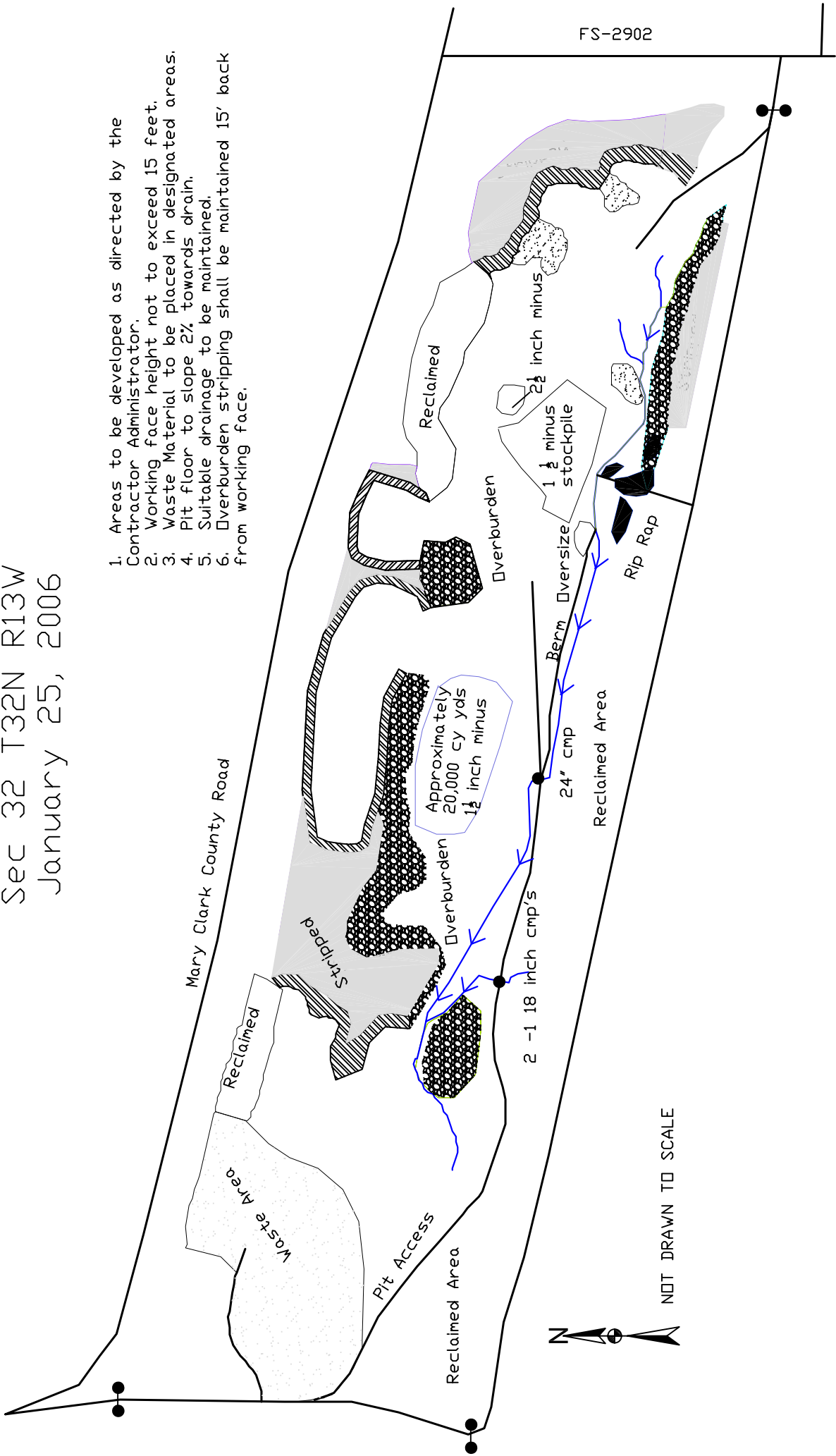
ROAD PLAN

SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

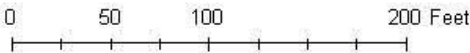
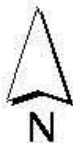
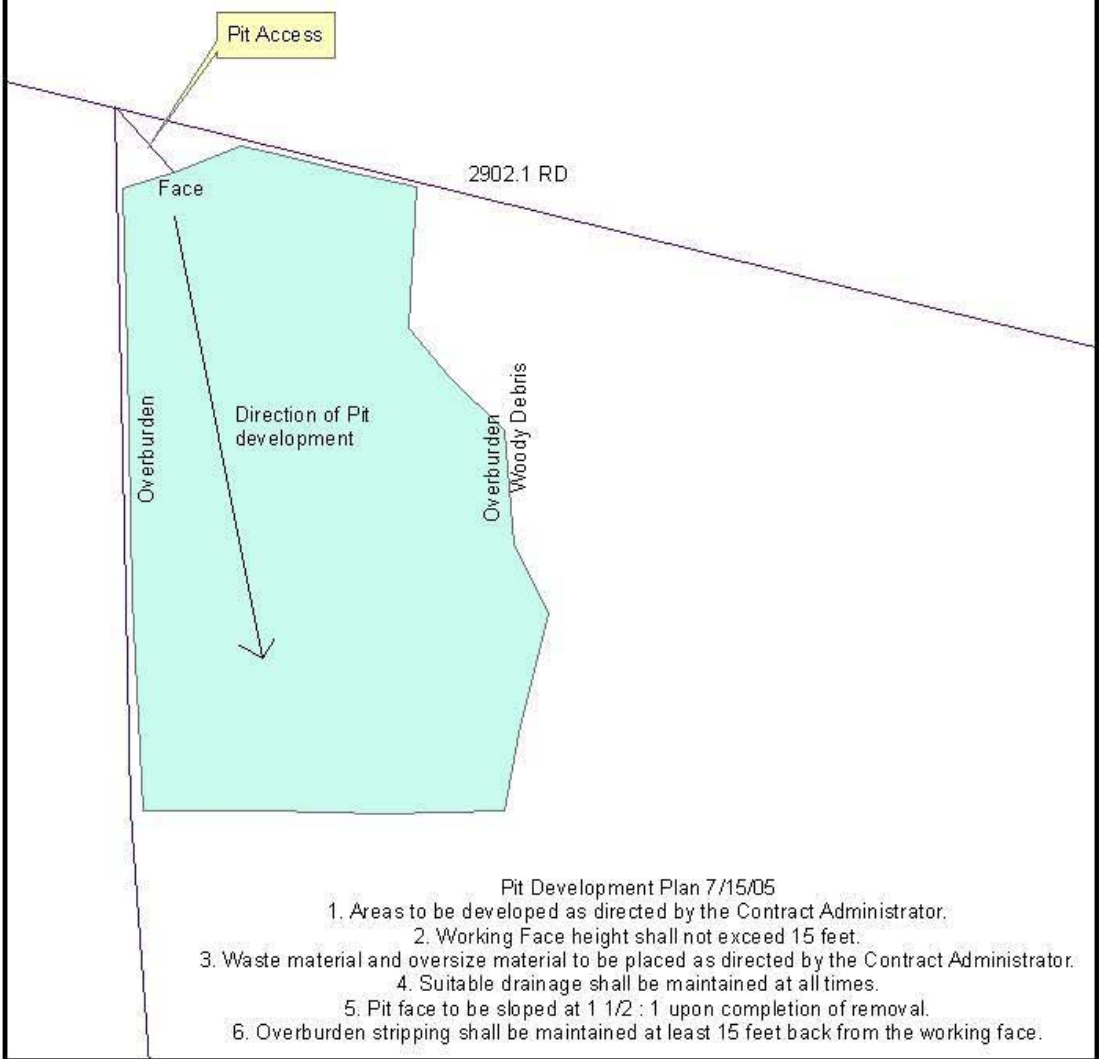
Mary Clark Pit Plan
Sec 32 T32N R13W
January 25, 2006

- 1. Areas to be developed as directed by the Contractor Administrator.
- 2. Working face height not to exceed 15 feet.
- 3. Waste Material to be placed in designated areas.
- 4. Pit floor to slope 2% towards drain.
- 5. Suitable drainage to be maintained.
- 6. Overburden stripping shall be maintained 15' back from working face.



Boxcar Pit Plan

Section 32, T30N R12W, W.M.

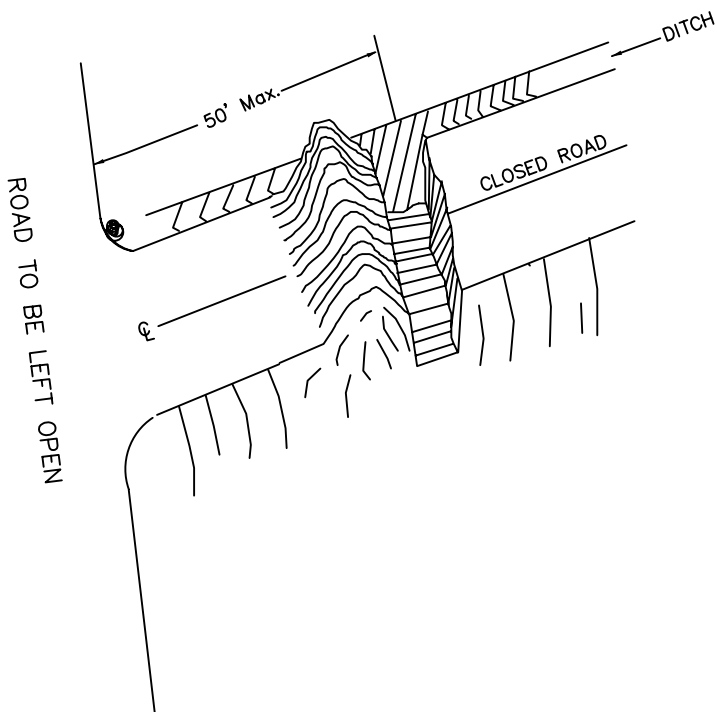


ROAD PLAN

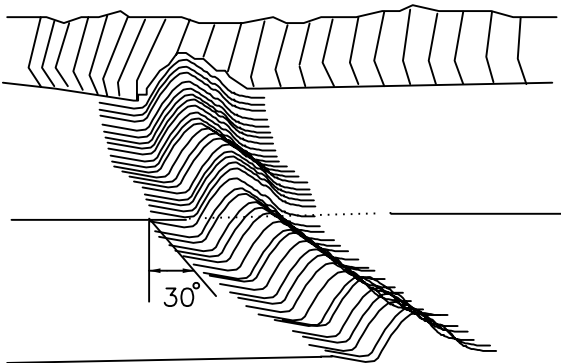
SALE NAME: Sekiu Timber Sale

ROAD PLAN DATE: 5/15/06

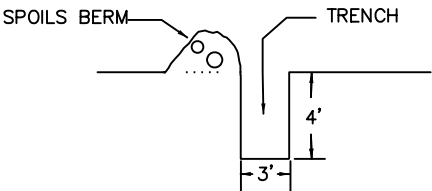
TANK TRAP DETAIL



NON-DRIVABLE
WATER BAR DETAIL



CROSS SECTION AT CENTERLINE



CROSS SECTION AT CENTERLINE

